

REMARKS

Claims 1-43 are pending. Independent claims 1, 11, 24, and 34 were rejected were rejected under 35 U.S.C. 102(e) as being anticipated by Shen (USP 6,377,627).

Shen describes a system for performing inverse discrete cosine transforms (IDCT). Shen determines if a non-zero value is located “in a preselected corner location in the matrix.” Shen constructs a modified matrix “having the same content as the original matrix with the exception of a zero in the preselected corner value position.” Shen also forms a dummy matrix having a zero “in each of its matrix positions with the exception of the preselected corner position.” An adder that “adds the inverse discrete cosine transform of the modified matrix and the dummy matrix to produce the inverse discrete cosine transform for the original matrix.” (Abstract) Shen does not identify zero patterns and uses the modified and dummy matrices during decoding.

By contrast, the independent claims 1, 11, 24, and 34 all recite identifying “zero patterns.” As defined on page 12, line 5 of the present application, “determining the location of zero values or near zero values in a block of transform coefficients is referred to herein as identifying zero patterns and zero pattern information.” Shen does not identify zero patterns and zero pattern information.

Shen determines if the C(7,7) position of a matrix has a “non-zero value” (4:20). Shen also determines if the bottom row is all zeros. “In the event that it is all zeros, it does not require any IDCTs to be performed and the transformation of the entire row is also all zeroes” (3:38-40). If the C(7,7) position has a “non-zero value,” the C(7,7) position is “modified to have a zero” (3:34-36). Shen only describes making a non-zero value a zero value in the C(7,7) position and “eliminating the need to perform an IDCT” if a row 7 or a column 7 has all zeroes (3:42-46).

However, Shen does not identify zero patterns and zero pattern information as recited in the claims. As noted in the present application, determining the location of zero values or near zero values in a block of transform coefficients is referred to herein as identifying zero patterns. According to various embodiments, the techniques of the present invention recognize that “one-dimensional inverse DCT operations do not need to be performed on rows or columns containing all zeros values or values close to zero. Values close to zero or near zero can be determined by identifying values below a set factor such as 2. Alternatively, values near zero may be determined as less than one percent of the average or maximum of all values. The number of

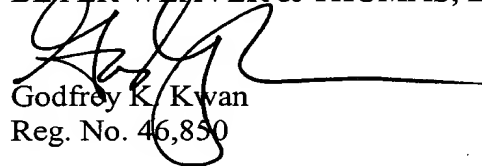
one-dimensional inverse DCT operations performed on a block of transform coefficients can be reduced by identifying zero patterns in the block” (page 11, lines 5-15).

Independent claims 1, 14, 24, and 34 all recite identifying zero patterns and are consequently believed patentable for at least the reasons noted above. However, to expedite prosecution, independent claims 24 and 34 have been amended to explicitly recite “wherein identifying zero patterns comprises determining the location of zero values or near zero values.”

Furthermore, claim 34 has been amended to further recite “computer code for setting a threshold for determining a near zero value in zero patterns.” Shen does not teach or suggest “setting a threshold for determining a near zero value in zero patterns.”

In light of the above remarks relating to independent claims, the remaining dependent claims are believed allowable for at least the reasons noted above. Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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